

WRDQ3 Series

Application

WRDQ3 Series dual power automatic transfer switch is design and manufactured by our company, is a special product developed as per to customers' requirements. This product has three functions of Auto Transfer with Auto Recovery, Auto Transfer without Auto Recovery and Grid-Generator Mode, monitoring the three phase voltage of two power sources at the same time, when any phase happened with over voltage, under voltage, phase missing, it can automatically transfer from the fault power source to normal power source. For the product with Grid-Generator model, it can also send Generator start signal. It is a widely used dual power transfer switch with perfect performance, reliable and highly automation. WRDQ3 Series Product including 4 series products of WRDQ3, WRDQ3NX, WRDQ3CM, WRDQ3NM.

This series auto transfer switch confirms to IEC60947-6-1 Standard.

Model Meanings

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①	Company code
②	Auto transfer switch
③	Design code
④	Structure type: C: can with DZ47, CM1. N: Can with DZ47, C65, CM1
⑤	Circuit breaker spec. X: Below 63A MCB M: Above 100A MCCB (have A, B, C, D four type controllers for option)
⑥	Controller Model: A: Basic type (only with auto change auto recovery integrated ATS) B: Intelligent type (Numerical indicate the voltage, Generator start, Fire linkage) C: Intelligent type (Same function as B type, but with LCD display) D: Intelligent type (Same functions as B type, but with frequency indication and remote communication)
⑦	Frame class
⑧	Rated current of circuit breaker
⑨	Poles: 2, 3, 4
⑩	R: Auto change auto recovery S : Auto change no recovery F: Power grid – Generator

Model Meanings

- Ambient Temperature: -5°C ~+50°C, and 24h average not more than +50°C;
- Atmospheric conditions: humidity not more than 50% at max. +50°C, higher humidity is allowed at lower temperature, at most wet month, the average max humidity is 90% at the average min temperature +35°C , and have considered the condensation on the product surface due to temperature variation.
- Altitude: Not more than 2000m;
- Pollution class: ambient pollution class 3.

WRDQ3-63

Application

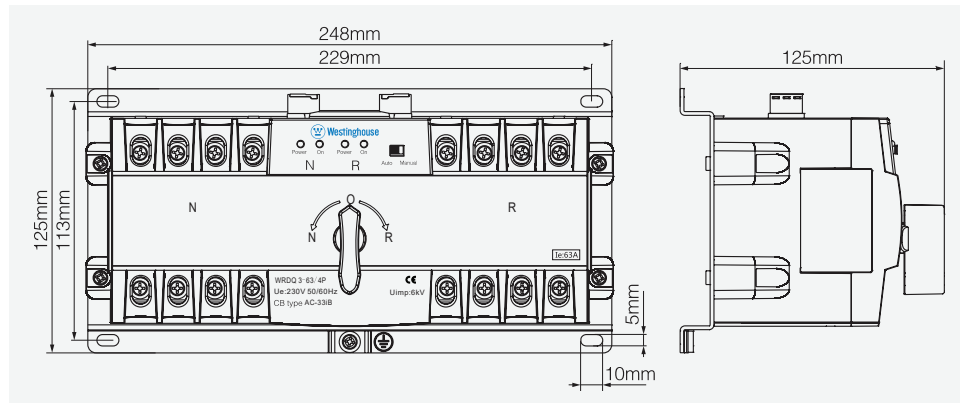


WRDQ3-63 is CB type dual power transfer switch, mainly apply to the two power systems with neutral line earthed and rated current below 63A, rated voltage 230V, 50/60Hz, transfer between two power sources when one power source fault, to ensure the power supply reliable and safety.

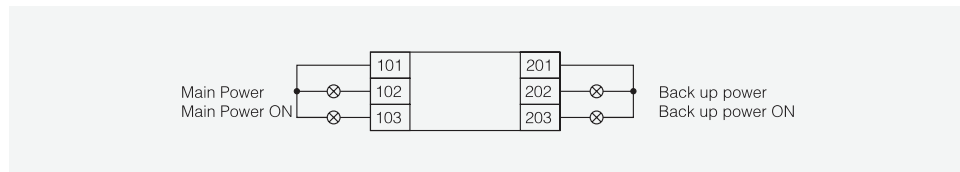
Technical And Structure Features

WRDQ3-63 Series ATS usage category AC-33iB, electrical appliance grade CB class, its structure comprised with two MCB and accessories, mechanical interlock transmission mechanism, automatic controller, motor operation mechanism etc. Meanwhile the MCB inside the ATS have its original overl o a d and short circuit protection function, can also used as ON/OFF and protection of the main circuit.

Outline and InstallationDimensions



Terminal And Wiring Instruction



- 101~103 main power external indicator light
- Signal output (AC220V 0.5A)
- 101- indicator light common null line
- 102- main power signal output
- 103- main power ON signal output

- 201~203 backup power external indicator light
- Signal output (AC220V 0.5A)
- 201- indicator light common null line
- 202- backup power signal output
- 203- backup power ON signal output

WRDQ3NX-A/B/C/D Series

Application



The fully new designed WRDQ3NX-A/B/C/D series Auto transfer switch is based on deep development on power transfer switch, make new design to product structure, controller, executive unit, electromagnetic compatibility etc., completely overturned the traditional dual power auto transfer switch design concept. It is a one of the smallest ATS, compact construction, easy for installation; Modularized design, enhance the power supply continuity, energy saving effect is better than other similar product.

Working Conditions

- Ambient Temperature: $-5^{\circ}\text{C} \sim +50^{\circ}\text{C}$, and 24h average not more than $+50^{\circ}\text{C}$;
- Atmospheric conditions: humidity not more than 50% at max. $+50^{\circ}\text{C}$, higher humidity is allowed at lower temperature, at most wet month, the average max humidity is 90% at the average min temperature $+35^{\circ}\text{C}$, and have considered the condensation on the product surface due to temperature variation.
- Altitude: Not more than 2000m;
- Pollution class : ambient pollution class 3.

Technical Features

The ATS according to the voltage status of the working power and the working model set by user, decide whether transfer from one power source to another power source. The function depends on the selected controller. The controller have A,B,C,D four types, the main functions and features as followings:

Features	Type	WRDQ3NX-A	WRDQ3NX-B	WRDQ3NX-C	WRDQ3NX-D
Operating power		AC150-265V 50/60Hz			
Installation mode		Integrated			
Working position		Two Position	Three Position	Two Position	Three Position
Operation mode		Auto and Manual	Auto and Manual	Auto and Manual	Auto and Manual
Generator control		No	5A relay contact point	No	5A relay contact point
Fire linkage		No	Passive contact input, With one no passive contact feedback contact	No	Passive contact input, With one no passive contact feedback contact
Transfer mode		Auto change auto recovery	Auto change auto recovery Auto change no auto recovery and Power Grid-Generator	Auto change auto recovery	Auto change auto recovery Auto change no auto recovery and Power Grid-Generator

WRDQ3NX-A/B/C/D Series

Features	Type	WRDQ3NX-A	WRDQ3NX-B	WRDQ3NX-C	WRDQ3NX-D
Transfer delay		Fixed 0.2s	0~30s adjustable	Fixed 0.2s	0~30s adjustable
Recovery delay		Fixed 0.2s	0~30s adjustable	Fixed 0.2s	0~30s adjustable
Monitored phase		A, N phase monitoring		A, B, C, N Phase monitoring	
Under volt monitor		Yes			
Phase missing monitor		A, N		A, B, C, N	
Use category		AC-33iB (CB Class)			

Basic Structure

WRDQ3NX-A/B/C/D series ATS is comprised with two MCB and accessories, mechanical interlock transmission mechanism, intelligent controller. It have A、B、C、D four type controller, A type is basic type, B is intelligent type, C/D is improved type, based on A/B type increased with three phase monitoring function, meanwhile the MCB inside the ATS have its original over load and short circuit protection function.



Product Features

Product with modularized design, executive unit, transmission mechanism, control circuit completely independent, easy for replacement.

- ① : Mechanical transmission device adopt gear transmission, completely eliminate the possibility of closing at same time;
- ② : Compact appearance, it is one of the smallest product on the market;
- ③ : The control circuit layout adopt working power and sampling power separate with single chip control, to overcome the electromagnetic interference from the hardware construction;
- ④ : Working power voltage range: AC200-400V;
- ⑤ : Less power consumption, max. peak power loss 4.8W, only 20% of other similar products;
- ⑥ : Product have complete functions, with generator start, fire linkage, ON delay functions etc.;
- ⑦ : Modularized design, good components interchange performance, easy installation;
- ⑧ : Can use various executive circuit breaker;

WRDQ3NX-A/B/C/D Series

Control Panel Functions

- ① : Main power indicator light
When main power voltage normal, this indicator lightens
- ② : Backup power indicator light
When backup power normal, this indicator lightens
- ③ : Main power ON indicator light
When switch on the main power position, this indicator lightens; when during the switch recovery delay status, this indicator flickering
- ④ : Backup power ON indicator light
When switch on the backup power position, this indicator lightens; when during the transfer delay status, this indicator flickering.
- ⑤ : Auto/Manual transfer mode control switch
When switch on left side is Auto transfer mode, on the right side is manual transfer mode
- ⑥ : Transfer delay time setting potentiometer (Main power to backup power transfer delay time)(A/C type without, B/D type have)
When ATS is on main power ON position, if main power fault and backup power normal, controller start the timing (the time setting by transfer delay potentiometer), after the timing is over then controller start transfer to the backup power supply; When setting longer time delay can avoid switch transfer due to power grid instant voltage drop (for example, there is a big size motor start in the same power grid, will cause the voltage drop in a short time period)
- ⑦ : Recovery time delay setting potentiometer (Backup power to main power transfer delay time) (A/C type without, B/D type have)
When ATS is on backup power ON position, if main power recovery and normal, controller start the timing (the time setting by the recovery delay potentiometer), after the timing is over then controller start transfer to the main power supply

